**U.S. ENVIRONMENTAL PROTECTION AGENCY**
**REGION IV**
**POLLUTION REPORT No. 21**

**Holtra Chem Chlor-Alkili Facility**
**One Industrial Drive**
**Riegelwood, Columbus County, NC**

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DATE: June 12, 2003

## I. BACKGROUND

| | |
|---|---|
| Site No.: | A47J |
| Delivery Order No.: | N/A |
| Response Authority: | CERCLA |
| Incident Category: | **State Referral** |
| CERCLIS: | NCD097361018 |
| NPL: | N |
| Site Category: | Industrial Chlor-alkali Facility |
| Responsible party: | Holtra Chem LLC, Honeywell Inc. |

## II. HISTORY

Refer to Action Memorandum, Consent Order, and previous POLREPs for site history.

## III. SITUATION

Refer to initial and routine POLREPs for site situation.

## IV. SITE ACTIVITIES

This POLREP covers activities for two work weeks.

**June 2 - 5, 2003**

EPA was not present on site during the June 2 - 5, 2003 reporting period due to a conflict with mandatory training. START provided Responsible Party (RP) monitoring, site documentation, and on-site real-time air monitoring during the entire reporting week. The weather was generally overcast and temperatures ranged from the upper-50s to the upper-80s.

Site activities for the week include the following. URS workers continued to disassemble, wash, and scrap cell cover stems within the Old Mercury Cell Building and Denuder No. 24 was drained of acid, caustic, and mercury. Workers attempted to remove the grids from this denuder prior to draining; however, due to residual amalgam and the presence of concrete used in previous repairs, this could not be done. Since it was determined that these grids could not be cleaned sufficiently for non-regulated disposal, it was decided to leave them in place for disposal along with the denuder in hazardous-macro boxes. Five metric-ton DOT shipping containers were filled with elemental mercury this week and are awaiting transportation off site. The mercury cell disassembly rack was cut into smaller pieces and disposed of as non-regulated material. Workers continued to remove side-liner bed-plate bolts, with the exception of joint bolts maintained for stability. As of the end of this work week, side-liner bed-plate bolts had been removed from nine mercury cells. Wash-water return pipes and caustic lines along the west side of the Old Mercury Cell Building continued to be cut, decontaminated, and removed. Small poly-vinyl chloride (PVC) process pipes connecting to the west side end-castings were removed. Four end-castings are present on each mercury cell: two each for the bed-plates (east and west side); and two each for the denuders (east and west side). Periodic power washing of the basement floor and general housekeeping activities were continued in the Old Mercury Cell Building to minimize volatilization of elemental mercury. Pipes continued to be removed from Pipe Rack G in the Bleach Plant/Products Area. Pipes and racks located to the east of the Products Area were prepared for future removal by crane. The scrubbers and caustic tanks in the Old Salt Dock Area were isolated. Waste water pre-treatment was continued in the Primary Waste Water Treatment Plant (WWTP) which is located in the Brine MESS Area. Four batches were processed throughout the week. In total, two 25-yard boxes of non-regulated material, one 30-yard box of non-hazardous construction debris, and three 30-yard boxes of non-hazardous scrap metal were transported off-site for recycling or disposal during the week.

On behalf of Honeywell, Andrew Soos conducted an H & S audit of the site on June 3, 2003. Nine Honeywell and URS site supervisors attended first aid and CPR training on June 6, 2003 for initial or refresher certification. URS work activities have been estimated by Honeywell at 17 days behind the last approved project schedule. During the past two weeks, URS has added seven workers to the project and four additional workers are scheduled to begin next week. URS has experienced substantial worker turnover during the course of this project. URS is attempting to increase the on-site staff from approximately 23 up to 30 personnel.

Air sampling was not conducted during this work week. Real-time air monitoring was

conducted at the four established off-site air sampling stations and mercury levels ranged between 25 - 54 ng/m3. These values are consistent with normal background mercury levels for rural areas for this time of year (the Lumex instrument detection limit is 10 ng/m3). On-site real-time air monitoring results from the exclusion zone perimeter locations showed slightly elevated readings immediately adjacent to the west side of the Old Mercury Cell Building and near the Brine MESS Area (maximum readings of 0.036 and 0.026 mg/m3 mercury, respectively). Hourly monitoring is conducted in perimeter areas exceeding 0.025 mg/m3. Mercury vapor levels in the Old Mercury Cell Building ranged from 0.011 to 0.331 mg/m3.

**June 9 - 12, 2003**

OSC Carol Geraghty provided on-site oversight of removal activities from June 10 - 12, 2003. START provided RP monitoring, site documentation, and on-site real-time air monitoring during the entire reporting week. The cell pit will be cleaned on Friday, June 13, 2003, using a limited crew. This activity is generally conducted every second Friday. The weather was clear and temperatures ranged from the low 70s to the mid-90s.

Site activities for the week include the following. URS workers continued to disassemble, wash, and scrap cell cover stems, began removing bed-plate end-castings from the mercury cells, and drained several additional denuders. Denuder draining activities were later suspended until the time of cell removal due to difficulties in treating large volumes of the high caustic flush water and the resulting significant increase in airborne mercury concentrations. The east side (pump side) bed-plate end-castings were removed from Mercury Cell nos. 23 and 24 and the west side (trap end) bed-plate end-castings were removed from Mercury Cell nos. 22 and 23. Work is on-going on the west side bed-plate end-casting for Mercury Cell No. 24. PVC pipe was removed from the east-side end-castings of the mercury cells. Workers continued to remove side-liner bed-plate bolts, with the exception of joint bolts maintained for stability (12 have been completed to date). Work was also initiated on cover rail removal. Wash-water return pipes and caustic lines along the west side of the Old Mercury Cell Building were cut, decontaminated, and removed. Only conduit lines remain to be removed from this area. Several additional lines remain on the east side of the building, and one line thought to contain steam actually contained mercury upon torch-cutting. A decision was made to cut all remaining lines with a saw to avoid potentially volatilizing any additional mercury. Periodic power washing of the basement floor and general housekeeping activities were continued. Pipe removal from Pipe Rack G (located to the east side and parallel to the Bleach Plant and Products Area) was completed, some work was conducted on Pipe Rack H (connecting the Products Area to the Cooling Tower), and pipe removal from Pipe Rack E (connecting the substation to the Old Mercury Cell Building) was initiated. Pipe and equipment was also cut from within the Products Area to ready for future crane removal. Demolition activities began on the chlorine receivers. Saturation pipe was removed from the Old Salt Dock Area. Waste water pre-treatment was continued in the Primary WWTP (four batches were discharged this week). Acid addition was required to reduce the pH in the mess head tank water as a result of drained caustic from the denuders. The Primary Decontamination Pad, located in the former Cooling and Drying Area, is being used for decontaminating external pipe potentially contaminated with mercury. Any material removed from the Old Mercury Cell Building continues to be decontaminated inside the building. Once cleaned, material is being staged on the Material Staging Area (MSA) or Retort Pad

Decontamination Area (RPDA) to dry prior to screening and placing into roll-off boxes. Drums of cell pit clean-out solids are being added to the hazardous-macro boxes at a rate of six drums per box to facilitate disposal of this material. Regulations allow up to 49 % of non-debris to be placed in these boxes. Cleaned titanium anodes remain staged on the RPDA and on the south side of the site pending final resolution of shipping and handling issues with the owner. These anodes are owned by El Tech and had been leased by Holtra Chem while the facility was in operation. The anodes from both areas will be moved to the former Bleach Plant Pad once plastic sheeting is placed on the concrete as a precaution (all have been cleaned and passed mercury screening). In total, two boxes (one 20-yard and one 25-yard) of non-regulated material, three 20-yard hazardous-macro boxes, two boxes of non-hazardous scrap metal, one 5-yard box of non-hazardous scrap copper, and five metric-ton cylinders of mercury were transported off-site for recycling or disposal during the week. Ten empty metric-ton mercury shipping cylinders were also received on June 11, 2003.

A minor release of chlorine dioxide occurred on June 10, 2003 at neighboring International Paper (IP) which resulted in a temporary shut-down of IP facility operations. Evacuations were not necessary at the Holtra Chem site, and the release did not impact site operations. URS representative Millard Griffin was on site June 10, 2003 to conduct an H & S audit of site operations. Mr. Lynn Phillips, District Manager of OMI (employer of Holtra Chem plant personnel), was on site June 10 - 11, 2003 to meet with OMI staff. Honeywell attorneys were on site June 11 - 12, 2003 to meet with plant personnel and tour the site.

Two rounds of air sampling were conducted during this work week (June 10 and 12, 2003). Real-time air monitoring was also conducted at the four established off-site air sampling stations and mercury levels were not detected above instrument detection limits (<10 ng/m3). On-site real-time air monitoring results from exclusion zone perimeter locations showed elevated readings at multiple locations adjacent to and around the Old Mercury Cell Building (maximum reading of 0.041 mg/m3 mercury) and in the URS prep building (maximum reading of 0.033 mg/m3 mercury). None of these values exceeded regulatory limits requiring the use of engineering controls or personal protection equipment (PPE). Mercury vapor levels in the Old Mercury Cell Building ranged from non-detect to 0.767 mg/m3. The only readings above 0.5 mg/m3 mercury (action level for upgrading to Level B PPE) occurred during the afternoon of June 11, 2003. Aggressive power washing of the floor was immediately conducted and the airborne mercury concentrations dropped back to Level C range.

PPE requirements continue to be Level B for cell pit operations and Level C for other building locations. Exterior operations are conducted in Level D PPE (excluding line breaking operations). As of this week, heat stress has become a significant concern and the OSC met with Honeywell and URS H & S personnel to discuss engineering controls and procedures to minimize impacts to workers.

## V. FUTURE ACTIVITIES

OSC Carol Geraghty will provide oversight during the June 16 - 19, 2003 work week.

Australian visitors, escorted by Mark Kamilow of Honeywell, are anticipated to tour the Holtra

Chem site one day next week to observe procedures for decontaminating equipment used in the mercury cell process.

40-Hour HAZWOPER Training is scheduled for approximately eight - 12 new URS contract employees during the June 23 - 26, 2003 work week (class will be conducted during four 10-hour days).

The next All-Hands Monthly Meeting will occur at 12:30 PM, June 24, 2003 (in the small meeting room). On June 12, 2003, Honeywell asked EPA if they should backfill the pit located under the former Cooling Tower. OSC indicated that RPM Urquhart-Foster should be consulted since that area may need to be sampled and possibly addressed as part of the EE/CA and non-time-critical removal action planned for the site. This question will be raised during the June All-Hands Monthly Meeting.

Site work during the next week will include bed-plate end-casting removal and decontamination, bed-plate side-liner bolt removal, and pipe removal in Pipe Rack E. URS also anticipates removing Mercury Cell No. 24 next week (including denuder flushing, removal of remaining end-castings, bed-plate and side-liner removal, and hydrogen cooler removal). Aggressive air monitoring and careful review of this procedure will need to occur and process adjustments made as necessary. Crane operations in the Products Area may occur next week.

## VI. DISPOSAL SUMMARY

| Disposal Summary for Week of June 9 - 12, 2003 | | | |
|---|---|---|---|
| Waste Stream | Disposal Destination | Quantity Shipped This Week | Quantity Shipped To Date |
| Hazardous - Micro | Waste Management - Emelle Treatment Facility<br>Emelle, AL | None | 12 boxes total:<br>(2) 20-yd boxes<br>(10) 25-yd boxes |
| Non-Regulated Material (Directly Land Filled) | Waste Management - Emelle Treatment Facility<br>Emelle, AL | 2 boxes total:<br>(1) 20-yd box<br>(1) 25-yd box | 22 boxes total:<br>(1) 20-yd box<br>(21) 25-yd boxes |
| Hazardous - Macro (Including ACM Hazardous) | Waste Management - Emelle Treatment Facility<br>Emelle, AL | (3) 20-yd boxes | (23) 20-yd boxes |
| D009 (Wastewater Filter Cake) | EQ - Michigan Disposal Waste Treatment<br>Belleville, MI | None | (4) 30-yd boxes<br>(87,140 lbs.) |
| ACM (Non-Haz) | Anson Waste Management Facility<br>Polkton, NC | Task Complete | (3) 40-yd boxes |
| Non-Haz Construction Debris | Sampson Co. Disposal Facility<br>Roseboro, NC | None | (13) 30-yd boxes<br>(85,000 lbs.) |
| Non-Haz Scrap Metal | Southern Metals Recycling<br>Wilmington, NC | (2) boxes | (27) boxes<br>(est. 380,446 lbs.) |

| Disposal Summary for Week of June 9 - 12, 2003 | | | |
|---|---|---|---|
| Non-Haz Scrap Titanium | Southern Metals Recycling Wilmington, NC | None | None |
| Non-Haz Scrap Copper | Southern Metals Recycling Wilmington, NC | (1) 5-yd box | (3) 5-yd boxes (est. 25,000 lbs.) |
| Reclaimed Elemental Mercury (for Reuse) | Goldsmith Evanston, IL | (5) one-metric-ton cylinders (11,030 lbs.) | (10) one-metric-ton cylinders |